Developing consensus on social frailty assessment in older people: A Delphi study

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ABSTRACT

Background and aim: The growing recognition of social frailty as a key dimension of overall frailty in older adults highlights the need for a standardised assessment tool. This study aimed to identify the key components that assess social frailty in elderly aged 65 and above by establishing expert consensus.

Methods: Using a, four-phase Delphi method to establish consensus among global experts who were : clinicians and with lived experience. This involved an extensive literature review followed by consultation with experts for item generation and then followed by two rounds of follow up surveys to confirm their consensus on the items proposed. 70 percent consensus across the two waves of survey along with z score values and Inter-rater reliability were used to identify the assessment items before being classified as per themes identified in the literature.

Results: The study engaged over 200 experts across Australia and few from other nations. 118 items were shared with the experts among with 56 received consensus through analysis across 6 different domains classified according to the literature. Through establishing consensus between experts in frailty, this study developed a comprehensive list of key indicators to measure social frailty in elderly. These key indicators are expected to researchers and clinicians help measure social frailty in elderly when designing, evaluating, and implementing interventions to prevent and/or to improve frailty.

Keywords: Social frailty, Delphi method, Ageing, Social support, Social engagement

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EXTENDED SUMMARY

Theoretical Focus

The concept of frailty, once primarily defined by physical health decline, has evolved into a more comprehensive framework encompassing not only physical but also psychological, social, and environmental factors. This shift aligns with the biopsychosocial model, which underscores the interconnectedness of these dimensions in contributing to overall frailty (Gobbens et al., 2010). Social frailty, in particular, is a relatively recent focus, highlighting the risks associated with diminishing social resources, networks, and participation. The theoretical foundation for this study is the Social Production Functions (SPF) theory, which identifies social well-being as a key element in individual quality of life, emphasizing social support, participation, and self-management abilities (Lindenberg, 2013).

The primary goal of this study is to develop a consensus-based tool to assess social frailty in older adults, filling a gap in the current frailty literature where the social dimension has often been neglected or inconsistently operationalized. The Social Frailty Index (SFI) will provide researchers and clinicians with a comprehensive measure to assess social vulnerability among the elderly, enabling early intervention and improving health outcomes. The tool draws on both theoretical insights and empirical data to ensure it captures the full range of factors influencing social frailty.

Data

The study relies on a diverse set of data gathered through multiple rounds of surveys distributed to a global panel of experts. Participants included both individuals with lived experience of frailty (people aged 65 or older and their caregivers) and professionals with expertise in gerontology, geriatrics, and related fields. The first round of the Delphi process saw participation from 118 individuals, and 53 participants completed the second round. This broad base of respondents ensures that the tool reflects a wide range of perspectives and experiences across different cultural and healthcare contexts.

The data collected during the Delphi process involved both quantitative and qualitative inputs. Respondents were asked to rate the importance of various social frailty indicators on a Likert scale, and they were also encouraged to provide comments and suggestions for improving the clarity and relevance of the proposed indicators. This iterative feedback process allowed for the refinement of the tool across several rounds, ensuring that it accurately captures the key components of social frailty.

Research Methods

The study employed a Delphi method, a structured and systematic approach to building consensus among experts through multiple rounds of surveys. This methodology is particularly well-suited to complex topics like social frailty, where expert judgment is needed to refine and validate assessment tools. The Delphi process consisted of four phases:

1. Phase 1: Literature Review and Initial Consultations: The study began with an extensive review of the existing literature on frailty and social frailty. This review informed the

development of an initial set of indicators and domains that were then reviewed by an internal and external expert panel.

2. Phase 2: Online Focus Group Discussion: The next phase involved an online focus group discussion with five experts who had lived experience with frailty. This group provided feedback on the proposed indicators, helping to refine the survey questions and ensuring that the language and concepts were accessible to non-experts.

3. Phase 3: Delphi Round 1: An online survey was distributed to over 200 experts globally, inviting them to rate the importance of the proposed indicators using a Likert scale. In addition to quantitative ratings, respondents were encouraged to provide qualitative feedback on the relevance and clarity of each indicator. Experts also indicated whether they were willing to participate in the second round of the survey.

4. Phase 4: Delphi Round 2: The second round of the survey was sent to experts who had consented to participate further. This round presented the same indicators along with aggregated feedback from the first round, prompting participants to re-evaluate their ratings based on the group consensus.

The Delphi method was selected for its ability to combine expert opinion into a coherent, validated tool while minimizing the influence of individual biases. The iterative nature of the process allowed for continuous refinement of the assessment tool, leading to a final set of indicators with high consensus among experts.

Findings

The study aims to (SFI) that can be used across different settings and populations to assess social frailty in older adults. Based on the consensus-building process, the final set of indicators is expected to reflect a comprehensive understanding of social frailty, incorporating factors such as social isolation, participation in community activities, support networks, and self-management abilities.

Preliminary findings indicate that social frailty is a multifaceted concept, with key indicators including:

1. Social Support: The availability of family, friends, or community members to provide emotional and practical support.

2. Social Participation: Engagement in community activities, cultural events, and social gatherings, as well as the frequency of interactions with others.

3. Self-management: The individual's ability to maintain their own well-being, manage finances, and access healthcare resources independently or with minimal assistance.

4. Sense of Belonging: The individual's feeling of connection to their community, neighbourhood, or social groups, which contributes to their overall social well-being.

Through the Delphi process, the study has also uncovered certain limitations in existing tools used to measure social frailty. For instance, many existing scales fail to capture the dynamic nature of social relationships, focusing too narrowly on static indicators like living arrangements or frequency of social interactions. The SFI developed in this study addresses these gaps by incorporating a broader range of factors, including digital social participation

(e.g., using the internet to stay connected with family and friends) and the impact of financial difficulties on social participation.

The study is also expected to highlight cultural differences in the perception and importance of certain social frailty indicators. For example, while living alone may be considered a significant risk factor for social frailty in some cultures, it may be less relevant in others where intergenerational living is more common. By including a diverse panel of experts from different cultural backgrounds, the study ensures that the final tool is adaptable to different contexts while retaining its core validity.

Implications for Practice

The development of a consensus-based Social Frailty Index (SFI) has significant implications for both clinical practice and public health policy. Clinicians will be able to use the SFI to assess the social vulnerability of their patients more accurately, enabling earlier interventions that can prevent the progression of frailty and improve quality of life. The tool will also support more targeted and personalized care, as healthcare providers will have a clearer understanding of the social factors that contribute to an individual's frailty.

In terms of public health, the SFI can inform policy decisions by highlighting the importance of social factors in healthy aging. Policymakers can use the tool to identify at-risk populations and allocate resources to programs that enhance social support and participation among older adults. Additionally, the SFI can serve as a valuable outcome measure in research studies, allowing for more robust evaluations of interventions aimed at reducing social frailty.

Limitations and Future Research

While the Delphi method is a robust tool for building consensus, the study acknowledges several limitations. First, the reliance on online surveys may have excluded participants without internet access, particularly older adults in low-resource settings. Second, the relatively short time frame for each round of the Delphi process may have limited participation, particularly among busy professionals. Future research should aim to address these limitations by incorporating more diverse recruitment strategies and extending the timeline for data collection.

Another area for future research is the cross-cultural validation of the SFI. While the Delphi panel included experts from various countries, the majority of respondents were from Australia. Further studies are needed to test the applicability of the tool in different cultural contexts and to refine the indicators based on local norms and values. Data from the randomised control trial Fittest Trial study currently under way in Australia will be used for validation and reliability of the items as well as the scoring of the instrument.

In conclusion, the development of the Social Frailty Index represents a significant advancement in the field of gerontology. By incorporating expert consensus and a robust theoretical framework, the SFI provides a comprehensive and validated tool for assessing social frailty in older adults. This tool has the potential to improve both clinical practice and public health outcomes, ultimately enhancing the quality of life for aging populations worldwide.

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